

## **Embedding experiential learning in HE sport coaching courses; An action research study**

### **Abstract**

Despite recommendations imploring coach educators to utilise experiential learning, analyses of how this has been implemented are sparse. This study analyses the integration of experiential learning within a UK Higher Education Institution (HEI) context. Student coaches were provided with coaching opportunities with local school- children. Data were collected over three years through student interviews, coach educator reflections and discussions with a critical friend. Experiential learning presented two key challenges; 1) dealing with difficult emotions and competence awareness by students and the coach educator; 2) ensuring children received appropriate coaching practice. The integration of mediated pedagogical strategies helped overcome these problems.

**Keywords:** experiential learning, flipped classroom, coach education

## 1. Introduction

Whilst non-formal and informal coach education have been explored and analysed (Cushion, et al., 2010), the central focus of much research has been on formal coach education delivered by Higher Education Institutions (HEIs) and Sport Governing Bodies (Cushion, et al., 2010; Cropley, et al., 2012; Nelson, et al., 2006; Trudel, et al., 2010). In general, this literature has been critical of formal coach education courses<sup>1</sup> (Cushion, et al., 2010; Knowles, et al., 2006; Lyle, et al., 2010), in particular for their decontextualised, compartmentalised approaches that may provide sport science information, but typically fail to enhance coaches' holistic pedagogical knowledge (Nelson, et al., 2006). Furthermore, these courses also tend to involve simulated peer coaching; a situation that fails to replicate the authentic complexities of actual coaching contexts that coaches experience (Nelson & Cushion, 2006).

Specifically, formal coaching courses in UK HEIs have traditionally contained a wide variety and depth of content that generally includes research methods, sport science, pedagogy and applied coaching modules. This content is regularly delivered to full time student coaches over a three-year period. Morgan, Jones, Gilbourne, & Llewellyn (2013) argue that the delivery of this content is not always contextually relevant to the practice of coaches in 'industry' and thus formal coach education courses may not develop the pedagogical skills required of coaching practitioners. Similarly, Knowles and colleagues (2005; 2006) explored perceptions of undergraduate coach education in HEIs and reported a chasm between the theory and rigour of educational experiences and the 'reality of life' as a sport coach. Indeed,

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<sup>1</sup> Formal coach education also includes courses which are organised by National Governing Bodies of Sport and thus not all criticism is reserved for those delivered in Higher Education Institutions.

coaching practitioners have expressed concerns that knowledge gained from formal qualifications<sup>2</sup> is divorced from the ‘reality’ of practice (Morgan, et al., 2013; Mouchet, et al., 2014; Turner & Nelson, 2009). Specifically, coaches have deemed knowledge gained from formal coach education as lacking the “interactive experiences within practical coaching contexts” that serve as “the principal knowledge source of both neophyte and experienced coaches” (Jones, et al., 2012, p. 313).

In contrast to formal coach education research, there has been support for informal learning processes such as experiential learning (Araya, et al., 2015; Callary, et al., 2012; Camire, et al., 2014; Kuklick, et al., 2015; Lemyre, et al., 2007; Mouchet, et al., 2014; Paquette, et al., 2014). Experiential learning has its roots in the work of John Dewey (1916/2011), who promulgated the value of knowledge gained from individual experience as a means of growth. Dewey espoused the value of shared informal learning that is relevant to the lives and contexts of learners. Dewey (1916/2011, p. 9) argues that without a relevant connection to the experiences of learners, “there is the standing danger that the material of formal instruction will be merely the subject matter of the schools, isolated from the matter of life-experience”. Dewey (1938) advocates that the quality of the experience for the learner is key, and that the educator’s role is to provide experiences that not only engage students but impact their future actions.

Consistent with Dewey, a range of authors argue that if structured appropriately, and if incorporating authentic, quality coaching experiences, then HEI based coach education can aid student learning (Araya, et al., 2015; Knowles, et al., 2001; Mallet, et al., 2009; Mallet &

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<sup>2</sup> This criticism is not solely directed at HEI based coach education but is also directed and based upon experiences of formal coach education developed by national governing bodies of sport.

Dickens, 2009; Mallet, et al., 2014). Consequently, Vella, et al. (2013, p. 417) implore coach educators within universities to ensure learning is;

Situating within practical demonstrations and discussions where the coach learner and coach educator work collaboratively to facilitate understanding of the applications of program content to coaching practice.

In response, coach educators have begun to adopt more innovative pedagogies. For example, Stoszowski and Collins (2015) integrated shared online blogs as a means of scaffolding reflection and exploring conceptions of coaching experience within a HEI coach education course. Findings from this intervention revealed that the use of such novel experiential learning pedagogies hold promise for coach educators through the promotion of higher order reflection.

There is however, an important caveat to the clamour for coach educators to embrace experiential learning. Indeed, whilst many studies (e.g. Callary, et al., 2012) have illustrated that naturally occurring coaching experience is crucial to the education of coaches, typically such studies have often focused on established, expert coaches whose experience has been gathered in the field rather than in Higher Education contexts (e.g. Jones, et al., 2003; Nash & Sproule, 2009). Indeed, even in the Stoszowski and Collins (2015) study cited above, it is important to note that the educators did not facilitate any coaching experiences. Thus, until this study, there has been limited light shed<sup>3</sup> upon the provision of experiential learning within formal coach education contexts. In particular, the lived experiences of student

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<sup>3</sup> Bethell & Morgan (2011) do however provide a useful account of problem-based learning and experiential learning effectively developing of students' knowledge and learning on a sport management course.

coaches rather than established coaches, and coach educators themselves, are noticeably absent from coach education literature.

## 2. Methodology

Imbued by the research discussed above, and as part of an action research project (Stenhouse, 1975), I (the first author) facilitated hockey and basketball coaching sessions. During these sessions, the student coaches worked with children from local schools for nine hours at the UK HEI. The coaching sessions were scheduled as part of an applied coaching module in which students were also provided with formal lectures on relevant topics e.g. coaching pedagogy. During and after this intervention, data were collected as means of evaluating the action and effecting positive change in my practice. To date, action research such as this has been used sparingly in sport science and coaching<sup>4</sup>. Accordingly, a brief introduction to the tenets of this methodology is provided to aid readers.

Action research is a paradigm of inquiry where the researcher's primary purpose is to improve the capacity and subsequent practices of the researcher rather than to produce theoretical knowledge (Elliott, 1991). A defining characteristic of action research is that the researcher initiates change, based on a feeling and ambition to create a 'better' human situation (Freire, 2005). Teacher educators in the UK have readily embraced and effectively utilised action research to challenge understanding, and subsequent transformation of, their own practice (Casey & Dyson, 2009; Rossi & Tan, 2012; Tinning, 1992). By contrast however, examples of action research from the field of coach education are sparse.

The close pedagogical links between teaching and coaching (Armour, 2011; Jones, 2006) would suggest that action research may aid coach educators effect positive changes in their practice. Consequently, the authors in this study attempted to effect change in our world through the integration of coaching theory and practice (Jones, et al, 2012). Specifically,

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<sup>4</sup> See Evans and Light (2008) and Ahlberg, Mallet, and Tinning, (2008) for notable exceptions.

following ethical approval by an institutional committee and informed consent, student coaches were tasked with planning, delivering, and reflecting upon sport (hockey and basketball) coaching sessions for local primary school children (year 3-6). This intervention took place in the second year of a three-year degree and was repeated for three years with different student cohorts. In total, three cohorts of student coaches (n=49) participated in the action, albeit with adjustments made each year to improve coach education practice. Students were urged to independently plan their sessions including learning objectives, and to utilise a reflective framework post-practice (Gibbs, 1998). Prior to the intervention, professional knowledge (Cote & Gilbert, 2009) was delivered to the students in other modules e.g. coaching practitioner skills, sport psychology, and anatomy and physiology. For readers, the applicability of this small-scale case study may relate to the lived experiences described herein. The following sections will provide more detail and position those involved within the project (McLaren & Kincheloe, 2005).

## **2.1 My Role as Coach Educator**

As coach educator, I aspire to develop coaches who are precise, critical, ethical, and empowering of athletes. Although not naturally occurring, it is posited that the experiences that I scheduled were 'naturalistic'. Furthermore, whilst I do not claim that coaching for nine hours represents the chaotic nature of all coaching practice, I argue that these experiences move beyond scenario-based methods e.g. case studies, as students are required to deal with authentic curricula, teachers, and children, whom have individual cognitive, motor, and affective needs. Whilst some may suggest that these experiences are more akin to teaching or sport specific instruction, we would argue that meeting the complex, multi-disciplinary needs of children involved in sport is youth participation coaching (Cote, et al., 2007), as

recognised by the International Council for Coaching Excellence (ICCE), and would qualify as sport pedagogy (Armour, 2011). The other role I fulfilled in this project is that of the principal investigator, with the aim of evaluating and improving my practice. Thus, I have endeavored to be critical of my coach education practice through my action research.

## **2.2 The Student Coaches**

The student coaches (n=49) involved throughout the study were undergraduate second year students on a three year Degree in Coaching and Sport Development at a University in the UK. As part of the course, students had previously studied a range of subjects as discussed previously<sup>5</sup>. The coaches ranged in age from 19 to 21 years. No participants had achieved high-level sporting performance but all had participated in physical education lessons<sup>6</sup> as children.

Students had previously acted as assistant coaches or observers in supervised school and/or community settings for short periods of voluntary work e.g. 25 hours. Some students did possess low-level coaching qualifications such as NGB level 1 coaching awards, Junior and/or Community Sport Leader Awards, but others didn't. In summary, the student coaches had limited prior coaching experience and would be positioned in the early stages of the academic coaching career (Christensen, 2014).

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<sup>5</sup> Following review an online link to the course detail can be added here if it is deemed appropriate

<sup>6</sup> For international readers, physical education in the UK is generally studied at school until the age of 16 as part of a national curriculum that promotes areas such as health, physical literacy, and sport through a range of practical activities.



## 2.3 Critical Friend

In keeping with other action research studies (see Casey & Dyson, 2009), a critical friend (second author) operated throughout the design and evaluation of the study. It is argued that critical friends can support action research by challenging principal investigators as they construct meaning from their actions (Marshall & Mead, 2005). To achieve this, the critical friend observed the student coaches, asked provocative questions of the coach educator, and provided feedback that informed the coach educator's practice, action reflection cycles, and data collection / analysis (Costa & Kallick, 1993).

## 2.4 Data Collection

Following the coaching sessions and as part of action research cycles, qualitative group interviews (Kvale, 2007) were conducted. The interviews were conducted with each cohort in a cooperative, amenable and co-constructed manner (Rossi & Tan, 2012; Kvale, 2007) with questions designed to explore the student coaches' experiences and perceptions but with the principal objective of informing the practice of the coach educator. It is important to reiterate that whilst the perceptions of the student coaches are interesting, in keeping with action research methodology, these perceptions were sought to improve the coach educator's practice rather than serving as a definitive account of student coach learning. Interviews are beyond the typical analysis required as part of standard quality assurance procedures<sup>7</sup> but served as an additional systematic evaluation that is emblematic of action research (Kemmis & McTaggart, 1992).

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<sup>7</sup> As part of the role of module tutor, naturally occurring data includes descriptive statistics on attendance, attainment (grades), and student satisfaction.

Data from two other sources were also used in the study; observations and reflections of the coach educator and discussions with the critical friend. The critical friend monitored and provided advice during collection and analysis of each source of data. To evidence credibility and trustworthiness, the authors point towards the transparency of their roles, multiples sources of data used, and three action research cycles undertaken.

## **2.5 Data Analysis Procedures**

Procedures described by Cote, et al., (1993) were used to analyse the data. Specifically, data were divided into meaning units. One example of a meaning unit from the second interview was:

If they are enjoying it, then, that's first and foremost. Then, that's where you can look at the development stuff. But the enjoyment thing is probably the bigger point.

An open coding strategy was applied to provisionally code each meaning unit. Such open coding was purposely grounded, descriptive and linked to the text. For example the above meaning unit was coded as;

Primary emphasis is on achieving enjoyment and secondary on development.

Categories of codes were created by revisiting the data and analysis and considering the inductive inference, meanings, and properties of codes. For instance, the above code was associated with other codes in a category labelled 'Coaching Outcomes'. Analysis of categories led to the emergence of themes.

### 3. Findings and Discussion

#### 3.1 Development of Student Awareness Through Experiential Learning

Data provided staunch support for the efficacy of naturalistic experiential learning as part of a formal coach education course (Cushion, et al., 2010; Lemyre, et al., 2007; Mallet, et al., 2009; Trudel, et al., 2010). For instance, a student coach declared;

The experience of coaching young children for two weeks was really good to assess my coaching in a real world context rather than just coaching my peers in class.

I have learnt so much with “doing” the sessions with ‘real kids’ rather than only reading about theories. I have never coached outside of university, so this has been almost perfect for me.

I (coach educator / first author) and the critical friend deemed experiential learning to be successful as it provided experiences that imbued student coaches with a “realistic picture of their [coaching] skills” whilst simultaneously providing “motivation and opportunity to develop practice”. Similarly, another student coach described how the experience has prompted her to consider the depth of her professional knowledge;

I wasn’t expecting them [children] to be that good, and I think I needed to get more knowledge about hockey. I didn’t think I needed to know that much about hockey, but I did need to learn more than I originally thought.

In this sense, the naturalistic coaching experiences acted as a useful awareness exercise and reference point for future development of professional knowledge. After considering the student coaches’ responses, observing coaching practice with the schoolchildren in the initial action research cycle, and engaging in discussion with the critical friend, I reached the conclusion that “they [student coaches] didn’t know what they didn’t know, in terms of technical

(professional) knowledge”. The emergent awareness of incompetence by students which occurred during the experience, is reminiscent of the popularised levels of competence model (Howell, 1982). The competence model itself (Howell, 1982, p. 30) posits that individuals performing interpersonal communicating actions such as instructing or teaching, do so at one of five stages;

- (1) Unconscious Incompetence.
- (2) Conscious Incompetence.
- (3) Conscious Competence.
- (4) Unconscious Competence.
- (5) Unconscious Supercompetence.

As a result of consciously acknowledging their (in)competence through engagement with reflective processes, students could be placed at the conscious incompetence stage and were prompted to further develop their coaching knowledge and skills in an attempt to become consciously competent;

I've got this book just because of the experience. I've used it quite a few times planning sessions because you've to got know exactly what to do. In April, I'm doing my level one to get even more knowledge. I've been booked onto it since I realised that I needed to know more about the sport.

### **3.2 Experiential Learning as a Challenging, Affective Experience**

Despite the benefits of experiential learning as a reference point and source of motivation, it was also an exercise that was fraught with anxiety for student coaches;

I thought I was going to be fine but the first time (coaching session) was really awkward and I panicked a bit and got a bit flustered and thought, I really don't know what to do. (Student coach interview).

For me, as a coach educator, this was particularly revealing. I had routinely failed to anticipate how anxious the students were about coaching “a small group of kids, for a relatively short period of time” and how emotionally challenging they found the experience to be;

I didn't see that coming. These are young, fit, confident sports people. They are outgoing and loud. Not rude but extroverted, untouchable almost, and certainly not shy. I was really surprised by how difficult and stressful they found it. Prior to the session most of the coaches seemed to be really looking forward to it and were quite blasé and very confident. But they really struggled to take control of the kids. They were afraid to set boundaries and take control. They found it really difficult to be the adult in charge and you could see some of them panic. Some made poor coaching decisions. After the first session ended there was a massive collective sigh of relief by the students and I was really shocked by how emotionally drained some looked. (Discussion with critical friend).

The difficulties that I observed, and the feelings the students discussed during the interviews, are in keeping with Dewey (1916/2011, p. 6) who suggests that experiential learning requires both “deliberate effort and the taking of thoughtful pains”. Engaging in this action-reflection practice enabled me to consider my coach education practice holistically and surmise that the intervention “has been a painful awakening” for the students;

I think students have been unconsciously incompetent for much of the past year. Realising this is not a pleasant experience for them. They sit in lessons and discuss coaching scenarios and come up with solutions to problems I have prepared. But, it is only when they have had to plan and deliver “real” coaching sessions that they realise how difficult it is and how little

they know. I think the realisation of their own incompetence has been an awkward and uncomfortable experience but it has also benefited them. They have developed a more realistic understanding of their knowledge and skill. (Discussion with critical friend).

Whilst it isn't wholly surprising that student coaches with limited practical coaching experience should be categorised as "unconsciously incompetent", the emotional challenges they experienced was enlightening for me. I had considered that prior pedagogical approaches implemented during the course had more effectively prepared the students for the experience. Furthermore, as I watched the students struggle to deliver appropriate coaching, I realised that perhaps I had taken for granted how difficult it is to coach children. For example, some students failed to implement basic coaching processes such as adjusting to the needs of the children e.g. by appropriately changing size of ball whilst others demonstrated minimal professional and/or pedagogical (professional) knowledge. I was worried that perhaps the children themselves were "paying a price" for my naivety. This is perhaps an ethical dilemma that is inherent to experiential learning. Accordingly, the experiential learning activity not only facilitated an uncomfortable awareness among student coaches of their own (in)competence, but also made me aware of the limits of my previous pedagogies.

### **3.3 Strategies to Mediate Experiential Learning – Professional Knowledge**

To safeguard the quality of the experience for the children, I decided that the student coaches needed more preparation in terms of sport specific knowledge, planning age-appropriate sessions, and reflection. Accordingly, I delivered a series of sessions on basketball techniques and games for the second and third cohort of student coaches. The provision of formal professional knowledge in a didactic manner is somewhat contradictory to the initial rationale for the study that emphasised naturalistic experiential learning (e.g. Callary, et al., 2012; Camire, et al., 2014; Kuklick, et al., 2016; Lemyre, et al., 2007). Nonetheless, I

decided that this course of action would help to improve the quality of the experience for the children and this was of paramount concern.

Dewey (1916/2011) supports formal education as a means to a) break down complex processes and knowledge into manageable parts, b) broaden the knowledge and exposure of students by introducing new concepts and practice, c) identify, and encourage the removal of undesirable practices. In keeping with this, a student coach perceived the provision of professional knowledge to be beneficial to his learning and practice;

You (coach educator) ran a couple of sessions, which helped a lot. In the early coaching sessions (with children), I used a lot of what you taught us and then I made a little tweak on some stuff. I think earlier on I used your sessions, playing it safe. I was quite nervous because I had never really coached that age before. (Student coach interview).

However, now that “I am providing more formal instruction on basketball techniques, there is less time to cover pedagogy, teaching methods, behaviour management, planning and reflection” (discussion with critical friend). In effect, some of the classroom material was replaced by the formal technical instruction. Unfortunately, to ensure that children received high quality experiences, a greater breadth and depth of pedagogical knowledge still needed to be delivered and this posed another problem that required action. To address this problem I opted to implement the ‘flipped classroom’ approach with the third cohort of students.

### **3.4 Flipped Classroom**

Flipping the classroom is a teaching model which is novel in coach education and involves ‘providing instructional resources for students to use outside of class, so that class time is freed up for other instructional activities’ (Enfield, 2013, p. 14). The flipped classroom circumvents the dichotomy of progressive and traditional learning debate by seeking to incorporate both approaches to learning (Enfield, 2013; Freeman Herried &

Schiller, 2013; Talley & Scherer, 2013; Tucker, 2012). For instance, the flipped classroom approach includes methods imbued by social constructivism (ref), such as teaching characterised by group work, debate and personalised support during class contact hours. In addition, traditional teaching methods such as whole group instruction are delivered by pre-prepared online sessions (Yeung & O'Malley, 2014).

In this case study, the flipped classroom involved the provision of four online lectures/seminars consisting of; coaching philosophy, coaching context, coaching methods and behaviour management, and four two hour collaborative planning and reflection sessions. The online lectures typically lasted between 30 and 45 minutes and the content of the lectures included discussion of theory, critique of evidence, sport coaching footage which illustrated exemplar points<sup>8</sup> and independent reading tasks. Crucially, by delivering this material online, '8 hours' of contact time for me to use was released. I decided to use that time for collaborative planning and group reflection sessions that supplemented the naturalistic coaching experiences and the formal technical instruction.

During the class sessions, I drew upon the Gibbs reflective cycle (Gibbs, 1988) and encouraged learners to reflect by describing, evaluating and analysing their thoughts, feelings and practices. When reflection between student coaches was superficial or lacking critical insight, I interrupted with probing questions. At the end of each session and in keeping with the Gibbs Cycle, student coaches were required to explain what different action(s) they would implement in the next coaching session with the children and thus the action-reflection cycle was perpetuated. Consistent with extant reviews of coach education (Cushion, et al., 2010; Trudel, et al., 2010; Cropley, et al., 2012), the student coaches identified the group reflection and planning sessions as key to their practice;

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<sup>8</sup> Following peer review and if desirable a sample of the lecture can be made available online.



I think if we had not reflected as a group, I think all of us would have just forgotten about what we had done. It helps when you are in a group. It's like you are bouncing ideas off people and that helps you to coach better. (Student coach interview).

In addition to this positive support for the reflective process, the online lectures received positive feedback from students;

You can pause it, take breaks, go over information at your own pace and being able to go back to information at any point was the best thing. (Student coach interview).

The combination of flipped classroom and experiential learning mediated student anxieties and ensured sound coaching practice was provided for the children involved;

The coaching experience gave them a real problem to solve and it has consequences for other people; in this case the children. I think that is why so many have watched the videos and why the attendance has been good in the workshops. Because the lectures are online, I now have the time to support them while they plan, and reflect on their sessions. This means the experiential learning is mediated by me, but that is better for the student coaches as we can address some of the anxieties that they feel, and help to improve their coaching practice. Ultimately, that may also benefit the children involved. (Coach educator reflection).

#### **4. Conclusion**

Experiential learning is an alternative educational philosophy that is often advocated in coach education literature (e.g. Callary, et al., 2012; Camire, et al., 2014; Kuklick, et al., 2016; Lemyre, et al., 2007). It is different to traditional, didactic teaching and is often seen as a panacea for the failings of traditional methods. From

this action research project, which drew upon the rarely considered voices of coach educators and student coaches, it is evident that experiential learning brings benefits, pitfalls and different levels of effectiveness. Thus, experiential learning is best seen as a pedagogical philosophy in its own right, rather than a remedy for all that is wrong with traditional formal coach education.

If viewed that way, then it can be implemented in many different ways by educators and even in conjunction with traditional teaching methods. Thus, in essence, experiential learning is not inherently good, bad, or even anti traditional direct instruction. Moreover, if organised and interrogated appropriately, it can be a useful pedagogical philosophy, an excellent awareness exercise, and a stimulus for intrapersonal reflection by student coaches and coach educators themselves.

Nonetheless, the affective and ethical challenges of experiential learning, which are reminiscent of Howell's (1982) competence model, need to be acknowledged and critically considered by coach educators. In this case, organising experiential learning alongside a flipped classroom enabled the coach educator to include some traditional, direct instruction alongside experiential learning, and this proved an effective means of supporting student coaches. This is not to say that coach educators should dominate experiential learning processes, but instead, should use experiential learning to connect with, and support students, such that both the "incidental (naturalistic experiential) and intentional (formal teacher led) modes" of education are utilised (Dewey, 1916/2011, p. 9).

## References

- Ahlberg, M., Mallet, C. & Tinning, R., 2008. Developing autonomy supportive coaching behaviours: An action research approach to coach development. *International Journal of Coaching Science*, 2(2), pp. 1-20.
- Araya, J., Bennie, A. & O'Connor, D., 2015. Understanding performance coach development: Perceptions about a postgraduate coach education program. *International Sport Coaching Journal*, pp. 3 - 14.
- Armour, K. M., 2011. *Sport pedagogy: An introduction for teaching and coaching*. 1 ed. London: Routledge.
- Bethell, S. & Morgan, K., 2011. Problem-based and experiential learning: Engaging students in an undergraduate physical education theory. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 10(1), pp.128-134.
- Callary, B., Werthner, P. & Trudel, P., 2012. How meaningful episodic experiences influence the process of becoming an experienced coach. *Qualitative Research in Sport, Exercise and Health*, 4(3), pp. 420-438.
- Camire, M., Trudel, P. & Forneris, T., 2014. Examining how model youth sport coaches learn to facilitate positive youth development. *Physical Education and Sport Pedagogy*, pp. 1-17.
- Casey, A. & Dyson, B., 2009. The implementation of models-based practice in physical education through action research. *European Physical Education Review*, 15(2), pp. 175-199.
- Christensen, M. K., 2014. Outlining a typology of sports coaching careers: paradigmatic trajectories and ideal career types among high-performance sports coaches. *Sports Coaching Review*, 2(2), pp. 98-113.
- Costa, A. L. & Kallick, B., 1993. Through the lens of a critical friend. *Educational Leadership*, 51(2), pp. 49-51.
- Cote, J. & Gilbert, W., 2009. An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching*, 4(3), pp. 307-323.
- Cote, J., Salmela, J. H., Baria, A. & Russell, S. J., 1993. Organising and interpreting unstructured qualitative data. *The Sport Psychologist*, Volume 7, pp. 127-137.
- Cote, J., Young, B., North, J. & Duffy, P., 2007. Towards a definition of excellence In sport coaching. *International Journal of Coaching Science*, 1(1), pp. 3-17.
- Cropley, B., Miles, A. & Peel, J., 2012. *Reflective practice; Value of, issues, and developments with sports coaching*, Leeds: Sports Coach UK.
- Cushion, C. et al., 2010. *Coach learning & development: A review of literature*, Leeds: Sports Coach UK.

- Dewey, J., 1916/2011. *Democracy and education*. Los Angeles: Simon and Brown.
- Dewey, J. 1938. *Experience and education*. New York: Kappa Delta Pi.
- Elliott, J., 1991. *Action research for educational change*. Milton Keynes: Open University.
- Enfield, J., 2013. Looking at the impact of the flipped classroom model of instruction on undergraduate multimedia students at CSUN. *TechTrends*, 57(6), pp. 14-27.
- Evans, J. R. & Light, R. L., 2008. Coach development through collaborative action research: A rugby coach's implementation of game sense pedagogy. *Asian Journal of Exercise and Sports Science*, 5(1), pp. 31-37.
- Freeman Herried, C. & Schiller, N. A., 2013. Case studies and the flipped classroom. *Journal of College Science Teaching*, 42(5), pp. 62-66.
- Freire, P., 2005. *Pedagogy of the oppressed*. 4 ed. New York: Continuum.
- Gibbs, G., 1988. *Learning by doing: A guide to teaching and learning methods*. 2 ed. London: FEU.
- Howell, W. S., 1982. *The empathic communicator*. 1 ed. Illinois: Waveland Press.
- Jones, R. L., 2006. *The sports coach as an educator: Re-conceptualising sports coaching*. 1 ed. London: Taylor and Francis.
- Jones, R. L., Armour, K. M. & Potrac, P., 2003. Constructing expert knowledge: A case study of a top-level professional soccer coach. *Sport, Education and Society*, 8(2), pp. 213-229.
- Kemmis, S. & McTaggart, R., 1992. *The action research planner*. 2 ed. Geelong, Victoria: Deakin University Press.
- Knowles, Z., Borrie, A. & Telfer, H., 2005. Towards the reflective sports coach: issues of context, education and application. *Ergonomics*, 48(11), pp. 1711-1720.
- Knowles, Z., Gilbourne, D., Borrie, A. & Nevill, A., 2001. Developing the reflective sports coach: A study exploring the processes of reflective practice within a higher education coaching programme. *Reflective Practice: International and Multidisciplinary Perspectives*, 2(2), pp. 185-207.
- Knowles, Z., Tyler, G., David, G. & Eubank, M., 2006. Reflecting on reflection: exploring the practice of sports coaching graduates. *Reflective Practice: International and Multidisciplinary Perspectives*, 7(2), pp. 163-179.
- Kuklick, C. R., Gearity, B. T., Thompson, M. & Neelis, L., 2015. A case study of one high performance baseball coach's experiences. *Qualitative Research in Sport, Exercise and Health*, 8(1), pp. 61-78.
- Kvale, S., 2007. *Doing Interviews*. 1 ed. London: Sage Publications.
- Lemyre, F., Trudel, P. & Durand-Bush, N., 2007. How youth-sport coaches learn to coach. *The Sport Psychologist*, 21(2), pp. 191-209.

Mallet, C. J. & Dickens, S., 2009. Authenticity in formal coach education: Online postgraduate studies in sports coaching at the university of queensland. *International Journal of Coaching Science*, 3(2), pp. 79-90.

Mallet, C. J., Rynne, S. B. & Billet, S., 2014. Valued learning experiences of early career and experienced high performance coaches. *Physical Education and Sport Pedagogy*, pp. 1-16.

Mallet, C. J., Trudel, P., Lyle, J. & Rynne, S. B., 2009. Formal vs. informal coach education. *international Journal of Sports Science & Coaching*, 4(3), pp. 325-334.

Marshall, J. & Mead, G., 2005. Editorial: Self-reflective practice and first-person action research. *Action Research*, 3(3), pp. 235-244.

McLaren, P. & Kincheloe, J., 2005. Rethinking critical theory and qualitative research. In: N. K. Denzin & Y. S. Lincoln, eds. *The sage handbook of qualitative research*. 3 ed. London: Sage, pp. 303-342.

Morgan, K., Jones, R. L., Gilbourne, D. & Llewellyn, D., 2013. Changing the face of coach education: using ethno-drama to depict lived realities. *Physical Education and Sport Pedagogy*, 18(5), pp. 520-533.

Mouchet, A., Harvey, S. & Light, R., 2014. A study on in-match rugby coaches' communication with players: a holistic approach. *Physical Education and Sport Pedagogy*, 19(3), pp. 320-336.

Nash, C. S. & Sproule, J., 2009. Career development of expert coaches. *International Journal of Sports Science & Coaching*, 4(1), pp. 121-138.

Nelson, L. J. & Cushion, C. J., 2006. Reflection in coach education: The case of the national governing body coaching certificate. *The Sport Psychologist*, Volume 20, pp. 174-183.

Nelson, L. J., Cushion, C. J. & Potrac, P., 2006. Formal, non-formal and informal coach learning: A holistic conceptualisation. *International Journal of Sports Science & Coaching*, 1(3), pp. 247-259.

Paquette, K. J., Hussain, A., Trudel, P. & Camire, M., 2014. A sport federation's attempt to restructure a coach education program using constructivist principles. *International Sport Coaching Journal*, pp. 75 - 85.

Rossi, A. & Tan, W. K., 2012. Action research in physical education: Cycles, not circles! In: *Research methods in physical education and youth sport*. London: Routledge, pp. 250-262.

Stenhouse, L., 1975. *An introduction to curriculum research and development*. London: Heinemann.

Stoszowski, J. & Collins, D., 2015. Using shared online blogs to structure and support informal coach learning. Part 1: A tool to promote reflection and Communities of Practice? *Sport, Education and Society*.

Talley, C. P. & Scherer, S., 2013. The enhanced flipped classroom: Increasing academic performance with student-recorded lectures and practice testing in a "flipped" STEM course. *The Journal of Negro Education*, 82(3), pp. 339-347.

Tinning, R., 1992. Action Research as Epistemology and Practice: Towards Transformative

Educational Practice in Physical Education. In A. Sparkes (ed.) *Research in Physical Education and Sport*. London: Falmer Press, pp. 188–209.

Trudel, P., Gilbert, W. & Werthner, P., 2010. Coach education effectiveness. In: 1, ed. *Sports Coaching: Professionalism and Practice*. London: Churchill Livingstone, pp. 135-153.

Tucker, B., 2012. The flipped classroom: Online instruction at home frees class time for learning. *Education Next*, 12(1).

Turner, D. & Nelson, L. J., 2009. Graduate perceptions of a UK university based coach education programme, and impacts on development and employability. *International Journal of Coaching Science*, pp. 3-28.

Vella, S. A., Crowe, T. P. & Oades, L. G., 2013. Increasing the effectiveness of formal coach education: Evidence of a parallel process. *International Journal of Sports Science & Coaching*, 8(2), pp. 417-430.

Yeung, K. & O'Malley, P. J., 2014. Making 'the flip' work: Barriers to and implementation strategies for introducing flipped teaching methods into traditional higher education courses. *Pedagogic Direction*, 10(1), pp. 59-63.